

## REMARKS

### I. Preliminary Remarks

Claim 1 has been cancelled and its limitation has been incorporated into amended claim 2. Claim 3 has been amended to provide consistent dependency with the amended claim 2. New claims 11 – 19 have been added. The support for the new claims can be found, for example, in paragraphs 21 through 22 of the specification and from the original claims, which are part of the specification. As such, no new matter has been added by this amendment. Claims 2-6 and 11-19 are now pending. Reconsideration and allowance of all of the claims in view of the above amendments and the following remarks are respectfully requested.

Applicant wishes to express his appreciation to the Examiner for his time in the May 3, 2004 telephone interview. The above amendments to the claims and the following remarks are in accordance with the material discussed in the telephone interview.

In the first office action dated February 2, 2003, the Examiner rejected claims 1-3 and 5 as being anticipated by U.S. Patent No. 3,618,154 (the '154 Patent), and claims 4 and 6 were rejected as being obvious in view of the '154 Patent as well. The office action states that column 5, lines 62-65 of the '154 Patent discloses a toothbrush (20) having a plurality of bristles (28) with a far-infrared radiation material. The '154 Patent is directed to providing a toothbrush with abrasive additive in the bristle to clean the teeth, i.e., to remove stains, plaque, pellicle, and tartar. The '154 Patent discloses that the abrasive material can be formed from 1:1 weight ratio mixture of alumina ( $\text{Al}_2\text{O}_3$ ) and zirconium silicate particles. See column 5, lines 62-65 of the '154 Patent.

Applicant respectfully traverses the above rejections for the reasons set forth below. Briefly, the present application is directed to providing a toothbrush with bristles that emit far-infrared radiation to stimulate the cells of the gums. In this regard, amended independent claim 2 and the original independent claim 5 of the present application recite that the bristles include a far-infrared emitting material including alumina ( $\text{Al}_2\text{O}_3$ ), titania ( $\text{TiO}_2$ ), ferrite ( $\text{Fe}_2\text{O}_3$ ), chromium oxide ( $\text{Cr}_2\text{O}_3$ ), silica ( $\text{SiO}_2$ ), yttria ( $\text{Y}_2\text{O}_3$ ), and magnesia ( $\text{MgO}$ ). The '154 patent teaches using alumina in the bristles but does not disclose any of the other elements recited in the independent claims of the present application such as titania ( $\text{TiO}_2$ ), ferrite ( $\text{Fe}_2\text{O}_3$ ), chromium

oxide ( $\text{Cr}_2\text{O}_3$ ), silica ( $\text{SiO}_2$ ), yttria ( $\text{Y}_2\text{O}_3$ ), and magnesia ( $\text{MgO}$ ). Accordingly, applicant respectfully submits that the '154 Patent does not anticipate or obviate the independent claims 2 and 5, and their respective dependent claims.

With regard to the new independent claims, the '154 Patent does not disclose, teach, or suggest the combination of far-emitting powders recited in each of the independent claims 11, 13, and 15. For instance, the '154 Patent does not disclose, teach, or suggest a far-infrared emitting powder including: "at least one of titania ( $\text{TiO}_2$ ), ferrite ( $\text{Fe}_2\text{O}_3$ ), chromium oxide ( $\text{Cr}_2\text{O}_3$ ), yttria ( $\text{Y}_2\text{O}_3$ ), and magnesia ( $\text{MgO}$ )," as recited in independent claim 11; "alumina ( $\text{Al}_2\text{O}_3$ ) and at least one of titania ( $\text{TiO}_2$ ), ferrite ( $\text{Fe}_2\text{O}_3$ ), chromium oxide ( $\text{Cr}_2\text{O}_3$ ), yttria ( $\text{Y}_2\text{O}_3$ ), and magnesia ( $\text{MgO}$ )," as recited in claim 13; nor "silica ( $\text{SiO}_2$ ) and at least one of titania ( $\text{TiO}_2$ ), ferrite ( $\text{Fe}_2\text{O}_3$ ), chromium oxide ( $\text{Cr}_2\text{O}_3$ ), yttria ( $\text{Y}_2\text{O}_3$ ), and magnesia ( $\text{MgO}$ )," as recited in claim 15. Accordingly, new independent claims 11, 13, and 15, and their respective dependent claims are allowable over the '154 Patent.

With regard to the new independent claim 17, the '154 Patent does not teach or suggest that the powder combination of a "far-infrared emitting material and a multi-element silicon-based mineral" is about 1% to 3% of volume of the nylon." The '154 Patent discloses that about 5% to 20% by weight of the abrasive material may be used, see column 4, lines 36-38 of the '154 Patent, but there is no teaching or suggestion as to using claimed volume percentage of the powder combination as recited in claim 17. Accordingly, new claim 17 and its dependent claims 18 and 19 are allowable over the '154 Patent.

**The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 07-1853. Should such additional fees be associated with an extension of time, applicant respectfully requests that this paper be considered a petition therefor.**

Respectfully submitted,

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Sung I. Oh, Reg. No. 45,583  
Attorney for Applicant

**Squire, Sanders & Dempsey, LLP**  
810 South Figueroa, 14<sup>th</sup> Floor  
Los Angeles, CA 90017  
Telephone: (213) 689-5176 \* Facsimile: (213) 623-4581